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ABSTRACT

Based on a review of the literature, this paper examines criticisms leveled against the communication audit developed by the International Communication Association (ICA) and then offers a modified version of the audit designed to meet those criticisms. Following a brief introduction, the first section of the paper reviews criticisms of the audit, noting that they fall into seven categories: (1) lack of centralized control over the data collection process, (2) inability to compare local organizations with national norms, (3) lack of follow-up procedures to test for impact, (4) the limitations of an essentially perception-based tool, (5) problems with its structure, (6) methods of data analysis, and (7) procedures for developing recommendations for the client-organization. The second section describes the new ICA Ohio University Regional Data Bank and compares it to the ICA audit National Data Bank, while the third presents a follow-up analysis of the impact of the regional data bank. The fourth section suggests procedures for developing client-centered recommendations, and the fifth section presents the modified survey instrument--the Survey of Organizational Communication--and discusses the impact of the instrument changes on future research efforts. Extensive tables of data and a copy of the modified instrument are appended. (FL)

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VALIDATION OF ORGANIZATIONAL COMMUNICATION AUDIT INSTRUMENTS

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VALIDATION OF ORGANIZATIONAL COMMUNICATION AUDIT INSTRUMENTS

Sincoff and Goyer (1978) concluded early in the ICA Communication Audit's development that:

> . . . the continuing development of the audit procedure, coupled with additional refinement of the audit instruments, and generation of data from within similar organizations, will provide researchers with opportunities to use a common yardstick to test and validate theories of organizational communication with greater confidence and precision than has been possible heretofore (p. 58).

The "continuing development of the audit" ceased, however, about 1979. Falcione, Goldhaber, Porter, and Rogers reported in 1979 that, "The research and development phase of the audit has now ended" (p. 2). Since that time there have been some modifications suggested (e.g., Downs, Clampitt, & Laird, 1981) and criticisms lodged (Smilowitz, 1983), but no comprehensive attempt to collect data for the purpose of testing reliability and validity of the instruments in the ICA Communication Audit (hereinafter referred to as the ICA Audit).

The impact of the ICA Audit has been immense. "The Audit has expanded and made more discernible the 'invisible college' of organizational communication scholars . . . it also appears to have enhanced the substantive and methodological quality of organizational communication research" (Barnett, Hamlin, & Danowski, 1981, p. 456). Few would deny its impact on the field of organizational communication in spite of its shortcomings.

The advantages of the ICA Audit are well documented. It was designed to overcome a variety of previous problems in organizational communication research: use of single instruments, limited situationalism, small unrepresentative samples, lack of standardization and norms, and limited measurement of actual behaviors, to name a few of the claims made by the audit's developers (Dennis, Goldhaber, & Yates, 1978; Falcione, Goldhaber, Porter, & Rogers, 1979; Goldhaber, Yates, Porter, & Lesniak,

1978). Despite the significant advances made by this effort, there remain problems in the structure and analysis of the data collected with the ICA Audit instruments.

It is the purpose of this paper to respond to criticisms and shortcomings of the ICA Audit identified by communication scholars and to continue the development of the ICA Audit. We do this in five parts: 1) discussion of concerns about and criticisms of the ICA Audit National Data Bank (NDB); 2) description of a new ICA Audit Ohio University Regional Data Bank (RDB) and comparison with the National Data Bank; 3) followup analysis on the impact of the regional; 4) suggested procedures for developing client-centered recommendations; and 5)presentation of a modified survey instrument and discussion of the impact of the changes on future research efforts.

PART I

Concerns About and Criticisms of the ICA Audit and the National Data Bank

After reviewing the available literature, we have concluded that the criticisms of the ICA Audit fall into seven main categories: lack of centralized control over the data collection process, inability to compare local organizations to national norms, no follow-up procedures to test for impact, the limitations of an essentially perception-based measurement tool, problems with the audit's present structure, methods of data analysis, and procedures for developing recommendations for the the client-organization based on the interpretation of the results.

First, there has been some concern with the lack of control over data collection. Originally, the audit's developers collected preliminary data and trained and supervised the collection of data by others (Goldhaber, Porter, & Yates, 1977). Soon, however, the audit materials became available to the public (Goldhaber & Rogers, 1979) and data was supplied to the ICA Audit National Data Bank from a variety of sources and under various collection conditions (Porter, 1979). It is important to test whether these variations have made the data

less stable and unreliable for comparisons to individual organizations. Some critics have suggested that ". . . given instrumentation variation and the inability to compare dissimilar organizations, development of a useful normative data base is at best very limited, and at worst naively presumptuous" (Sincoff & Goyer, 1978, p. 60). Comparison of the ICA Audit NDB to the single research team-controlled Ohio University RDB will address this issue.

An extension of the concern about the lack of data collection control and the inability to compare local organizations to the national norms, is the concern that no procedure is included to follow-up on the audit. Only one follow-up study has attempted to assess the impact of the ICA Audit (Brooks, Callicoat, & Siergerdt, 1979). The study examined 16 of the organizations that were audited in the early years of the development of the ICA Audit instruments. This somewhat limited study suggested possible follow-up procedures that could be used in future audits.

The discussion of the Ohio University RDB presented in this paper includes the report of a follow-up study to assess the impact of the ICA Audit and argues for using this procedure in future audits.

The fourth criticism is that the audit instruments are essentially perception-based (Smilowitz, 1983). Like many communication instruments (DeWine & Pearson, 1983), the ICA Audit instruments depend on subjects' perception of their own and others' perceptions of communication behavior in the organization. The Network Analysis and the Communication Diary are cited as examples of behavioral data by the developers (Goldhaber & Rogers, 1979). The Communication Diary, however, is seldom used and the Network Analysis asks for recall of information.

In addition to these broad considerations there are a number of structural problems in the ICA Audit instruments. First, the term "audit" is a misnomer. The term implies a financial assessment which, in many cases, has served to heighten client resistance to the procedure. In one audit with a banking institution,

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the very use of the word with the top executive understandab resulted in immediate withdrawal and apprehension. The term also implies an annual review. Since the ICA Audit procedures suggest a six month long procedure it seems absurd to expect any organization to start another audit process six months later.

Some organizations have complained that the audit is too long and more complicated than it needs to be. Even Goldhaber and Krivonos (1978) refer to the extreme length of time needed and the large number of persons involved in administering the audit instruments. They report one audited executive as saying the procedures amounted to "administrative overkill". He continued, "Large teams of auditors, lengthy questionnaires, and time-consuming interviews may well be needed . . . but it is difficult to convince a loan manager who counts his productivity in minutes and his profits in pennies to release a large number of employees for audit purposes" (p. 53). The response of Goldhaber and Krivonos (1978) is to suggest that "take home administrations" and "phone hot-lines" were being explored as possible alternatives.

The use of 5-point Likert-type scales by survey respondents reduces the usefulness of that information for the client. The ordinal scale restricts the opportunity to measure the finer changes in the communication patterns of an organization (Barnett, et al., 1982).

The final criticism centers on the lack of information about the development of recommendations to be presented to the client. Even the developers of the ICA Audit (Goldhaber and Rogers, 1979) fail to describe procedures for systematically and uniformly interpreting the data analysis into meaningful recommendations upon which the client can act. If the ICA Audit was designed to address weaknesses in earlier instruments then it should also consider how the data collected with its own instruments are used.

Part II describes the Ohio University Regional Data Bank developed by the senior authors.

PART II

The Ohio University Regional Data Bank (RDB)

Many of the recommendations we make later in the paper are based on statistical analyses of the Ohio University Regional Data Bank. First, we will describe the OU-RDB in its current form and then compare it to the ICA Audit NDB.

Description: Data were collected between 1978 and 1983 in 17 organizations with 1,580 respondents. Approximately 35% were salaried and 60% were hourly employees. Fifty-two percent of the respondents were males and 48% were females. Over 40% of the respondents had been with their organizations from one to five years. Sixteen percent were first line supervisors, 8% were in top management, 10% were in middle management and 50% had no supervisory responsibilities.

Twenty-eight percent had no communication training, 19% had little training and 13% had extensive training.

Insert TABLE 1 about here.

Analysis: In order to determine how the OU-RDB compared with the NDB both data sets were submitted to t-tests on each item. Of the 122 items on the original Survey instrument, 60% or 76 items were significantly different at $p<.001$ in the two data banks.[1] It appears that two possibilities exist: either the variety of data collection conditions and methods used in the NDB have resulted in more variation in scores than centrally controlled conditions or a regional sample is significantly different from a national sample. In either case, we are recommending the use of the NDB with caution and the development of centrally-controlled, regional data banks for more accurate normative comparisons.

The second type of analysis completed on the RDB was reliability tests. Cronbach's alpha was computed for each of the eight scales that comprise the Survey instrument. Table 2 reports the means of each of the 13 subscales, standard deviation, current alpha compared with the alpha derived from the NDB (as reported by Porter, 1979), and an indication of any items not contributing to the reliability. In almost every instance the reliability of the OU-RDB is higher than the NDB. It is higher

in every instance when selected items are deleted. Centrally-controlled data collection within a specific region appears to generate stronger reliability.

Insert TABLE 2 about here.

A factor analysis on the combined ICA Audit National and OU-Regional Data Banks (30 organizations and over 5,000 subjects) was completed on all 122 items making up the eight scales. The eight scales provide two different response options. Five of the scales, "Information Received," "Information Sent," "Follow-up," "Sources, " and "Channels," request respondents to indicate both the current status and the level of need for the particular scale (e.g., "This is the amount of follow-up now" and "This is the amount of follow-up needed"). The remaining three scales, "Timeliness," "Organizational Communication Relationships," and "Organizational Outcomes," request only the respondent's current perception. Therefore, the 8 scales are composed of 13 subscales.[2]

Using varimax rotation and a 50-40 criteria, the following eight factors emerged: "information received-current," "information received-needed," "supervisor relationship," "follow-up-needed" ("follow-up-current" did not emerge), "sources-needed" ("sources- current" did not emerge), "top management/organizational outcomes," "the grapevine," and "job complaints."

These factor structures lend support to our belief that the "grapevine" is a unique variable; and the item on "complaining about my job" is distinct from the "Sending Information" scale in its current form.[3]

Finally, each of the original subscales was factor analyzed using the OU-RDB with 1,580 subjects. Varimax rotation was used to find the factor solution. A 50-40 criteria was used to identify items loading on each factor. Tables 3-15 report those factor structures.

On the "receiving information - current" subscale, three factors emerged, similar to previously identified factors within the NDB (Daly, Falcione, & Damhorst, 1979; Daniels & Spiker, 1983). Factor 1 was identified as "organizational performance," factor 2 as "personal performance," and factor 3 as "policies and

benefits." On the "receiving information - needed" subscale two factors emerged: "organizational performance" and "personal performance/policies."

Insert TABLES 3 and 4 about here.

The factor structures for "receiving information-current" and "receiving information-needed," suggested the elimination of six items: 13, 14, 15, 16, 23, and 24. These items did not load on any factor and did not appear central to the development of the scale. The "sending information-current," "sending information-needed," "follow-up-current," and "follow-up-needed" subscales each yielded one factor structure. "Sources-current" and "sources-needed" each resulted in two factors: "organizational hierarchy" and "peer/subordinate." This factor structure suggested the elimination of two items: 55 and 56. "Timeliness" resulted in two factors: "management" and "peer/subordinate."

Insert TABLES 5 through 11 about here.

The "organizational communication relationships" scale resulted in the same factors previously reported (Chua & DeWine, 1981; Daniels & Spiker, 1983): "supervisor," "top management," "coworkers," and "personal influence." Retaining the highest loading items, we eliminated items from the "supervisor" factor that were repetitive in order to equalize the number of items for each factor. Those items eliminated were: 78, 81, 82, 83, 84, 85, and 90. The "organizational outcomes" scale yielded two factors: "organizational effectiveness" and "personal achievement." This factor structure suggested the elimination of two items that did not load on either factor and were not central to the scale development: items 100 and 102. The "channels" scale resulted in five factors representing "media," "phone/memos," "face-to-face," "publications," and "bulletin boards."

Insert TABLES 12 through 15 about here.

PART III

Follow-Up Assessment of OU Regional Audits' Impact

One of the criticisms of the ICA Audit procedures is a failure to follow-up with the audit clients. It is difficult to know how well the client was served by the audit experience

unless some assessment of the process was undertaken. In Part III we present the significant results of one such post-audit assessment.

Overview of Procedures: Six organizations which had participated in an ICA Audit were randomly selected from the Regional Data Bank. Each organization had completed an audit at least one year prior to this study. The primary products or outputs of these organizations encompassed human services and consumer goods. Specifically, a medical services clinic, police department, social service agency, newspaper, high school, and food service operation were surveyed.

Data were gathered from top organizational administrators utilizing personal interviews and written questionnaire surveys. The interviews were moderately scheduled and adapted from Brooks, Callicoat, and Siegerdt (1979). Several areas were investigated through the interview process: 1) extent to which the audit recommendations were implemented, 2) alterations in organizational processes such as behavior, events, practices, activities, and employee skills and, 3) whether these processes were changed, created, or discontinued.

A questionnaire survey, also adapted from Brooks, Callicoat, and Siegerdt (1979) was administered to each subject at the conclusion of the interview. Two closing questions were included that asked the administrators if they felt the audit was beneficial and worthwhile as a tool for the evaluation and improvement of communication in their organizations. (Copy in Appendix A)

Survey Results: The questionnaire survey results demonstrated noticeable improvement, as a result of the ICA Audit, in 50% of the organizations for all of the communication variables except underload. Specifically, the greatest perceived improvements were noted in the areas of communication sources, channels, and timeliness. Some noticeable improvement was revealed in communication roles, relationships, accuracy, usefulness, timeliness, quality, and sources. Communication overload was not viewed as improving in half of the organizations and responses to underload were distributed equally among "no," "some," and

"significant improvement" options.

Insert TABLE 16 about here.

The variables regarding productivity, performance ratings, morale, and complaints/grievances were perceived as improving significantly in relation to the audit recommendations. Some administrators saw little, if any, link between the audit and organizational variables which are abstractly related to communication.

Insert TABLE 17 about here.

The concluding questions indicated that all of the respondents believed the audit was a beneficial experience. Continued use of the ICA Audit as a tool for evaluating and improving communication was advocated by five of the administrators, while one administrator did not recommend such use without significant changes in the audit's format and wording.

Interview Results: The interview phase of the investigation yielded information pertaining to the recommendations and their implementation by the subjects after the auditors had disengaged from the organization.

Interviewees frequently demonstrated difficulty recalling recommendations made by the audit team when those recommendations were either rejected by the administrator or were not implemented for one reason or another. Those recommendations were deemed unworthy of further consideration by most administrators. The subjects found the references to audit recommendations which were viewed positively, implemented, or attempted, regardless of their success, easiest to recall and discuss.

Categories of problem areas uncovered by the audits began to emerge as the interview phase progressed: two-way communication, staff development, job information and materials, management expectations, performance appraisals, decision-making, recognition, and socializing. Numerous communication functions identified by the audit were illuminated as targets for improvement.

The interviewees credited their administrative responses to these organizational issues to the recommendations made by the audit team. In an effort to alleviate staff dissatisfaction with

the communicative problem areas, the administrators in five of the organizations instituted staff newsletters or bulletin boards, four initiated or expanded employee recognition pograms and staff development strategies, three changed the structure of content of meetings, three organizations increased social activities, and three revised or instituted new memo writing procedures. Specific strategies employed by the administrators to answer organizational deficiencies included improved orientation for new employees, development of standard operating procedure manuals by two of the organizations, memos enclosed in paycheck envelopes, and the testing of new performance appraisal techniques.

All of the administrators expressed a more acute awareness of the need for an increase in both the quantity and quality of upward and downward communication.

Interview Conclusions: The administrative measures taken by the organizations cannot be construed as unequivocal endorsement of the ICA Audit and its resultant impact. While we attempted to review the most salient issues, recommendations, and subsequent actions with the interviewees, there were areas of concern for the administrators.

One administrator perceived the audit's primary value as a means for revealing the lack of structure resident within their growing organization. Another suggested the audit illuminated problems, but not necessarily the appropriate solutions. Two of the interviewees contended the audit focused attention on previously determined problem areas or on plans already in the decision-making process prior to the initiation of the audit.

The follow-up interview data suggest several conclusions regarding the ICA Audit. First, the audit does appear to have the ability to identify or highlight communication problems and potential solutions within an organization. Aside from an awareness of obvious problems, the audit appeared, for a majority of the administrators, to provide viable alternatives, confirm the directions or courses management had already charted, initiate creative thinking or, in some instances, inspire administrators

to do nothing at all. Second, the data demonstrate that managers maintain their own form of organizational reality. The administrators will select and accept issue analyses and recommendations from an audit based on their own perceptions of organizational reality and what is most appropriate for their organizations, regardless of the nature of the recommendations. The recommendations may function as a force to propell communication behaviors to a higher level of consciousness for the purposes of observation, assessment, and modification.

PART IV

ICA Audit Procedural Modifications

One intention of the developers of the ICA Audit was to increase the standardization of instruments used so the resulting information had higher comparability (Goldhaber & Rogers, 1979). In the area of recommendations to clients it is our assessment that comparability and consistency are unlikely given the lack of information on procedures for their development. Although there are guidelines for the statistical analysis of the data from the Survey instrument (Goldhaber, 1983; Goldhaber & Rogers, 1979; Porter, 1979), there are no sources which discuss how the audit team creates recommendations from the combined data of the Interviews, Communicative Experience forms, and Survey results.

Goldhaber (1983) states:

> The results of the audit were reported orally and in writing to appropriate personnel. A brief report containing conclusions and recommendations was prepared for general organizational dissemination. A detailed report written in accordance with customary conventions for the reporting of survey-participant data (i.e., percentages, tabular presentations and content summaries) was also provided, primarily for the audit liaison committee and other appropriate personnel. Unless other information was specifically requested, descriptive statistics were the only calculation applied to the data (p. 395).

If there is to be standardization so that the impact of the recommendations can be assessed, then there should be uniformity in the procedures for generating the recommendations.

Developing Client-Centered Recommendations: The following

schema has been applied to the audits included in the Regional Data Bank with a high degree of success.

One of the most basic pieces of information provided a debater is of the necessity of developing a prima facie case. Among the hallmarks of the prima facie case are the inclusion of several questions during the development of affirmative arguments: is the plan workable? Is it desirable? Is it practical? These are the same questions that should be asked of any recommendations being made to the client organization. Has the audit team seriously considered whether or not the recommendations can be implemented in the organization? (Workable) Has there been sufficient consideration to the need for the recommendations? (Desirability) Will the recommendations actually fit into the reality of the organization as it exists? (Practical)

While there may be a variety of methods by which the audit team can arrive at answers to the above questions, we suggest the following route - POMRIE: Problem - Objective - Method - Reality Implementation - Evaluation.

PROBLEM - What is the pattern of perceptions among the respondents that can be identified as particular problems to be addressed? For instance, employees may have indicated that they need more information about organizational policies, pay plans and benefit programs, and the process through which they are evaluated. These three need areas could be addressed separately, but that is likely to present the client organization with too much information. We suggest drawing these three areas into a single category that could be called "Personnel Information." Accordingly, the problem statement can be formulated to take into account the respondents' needs.

Problem: Employees indicate they do not have sufficient information about personnel policies and practices.

OBJECTIVE - The objective is defined in terms of what the audit team suggests the client organization might accomplish in response to the Problem. The Objective should be phrased to meet the needs identified in the Problem.

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Objective: Employees should more fully comprehend the policies operating within the organization, know the pay and benefit program options available to them, and understand the process by which they are evaluated in their work roles.

METHOD - The approaches available for responding to the needs that have been identified vary according to a number of factors. However, providing the client with several options seems to be the most appropriate approach.

Method: The following options are suggested to address the problem of insufficient information about personnel policies and practices:

a. Development of a Policies and Procedures Manual for the organization.

b. Distribution of the Policies and Procedures Manual to all full and part-time employees, etc.

REALITY - Addressing the question of reality is actually the application of the "practical" question to the options for handling the Problem. The audit team must know enough about the client organization to make some reasoned judgments as to whether or not the recommendations are likely to be considered, whether the means exist within the organization to implement the recommendations, whether the same ideas have been tried in the past and what the reception was, etc.

Reality: Careful examination of the client organization indicates the following:

a. The development of a Policies and Procedures Manual is unlikely because of extremely limited resources within the Personnel Department.

b. However, it seems likely that a modification of the idea could be implemented with appropriate guidance, etc.

IMPLEMENTATION - The question of how the Methods will be

implemented again requires an understanding of the client organization. What is the likelihood that the available means will be used to achieve the recommended ends?

Implementation: The following steps are suggested for the dissemination of information about personnel policies and practices to the employees:

a. A representative small group of employees should meet with the Personnel Director to identify those issues that need clarification.

b. Working with the PD, the employees begin writing a rough draft of a Policies and Procedures Manual, etc.

EVALUATION - It is insufficient to suggest implementing changes without considering the mechanisms by which those changes will be evaluated. Consequently, the audit team should also make recommendations to enable the client organization to assess its own progress.

Evaluation: In order to assess the effectiveness of the delivery of information about personnel policies and practices, the following recommendations are presented:

a. Administration of the "receiving information" subscale of the ICA Audit six months after completion of the Policies and Procedures Manual.

b. Trivia questions about new policies in the organization's newsletter.

c. , Discussion of the policies during the annual employee appraisals to assess levels of understanding, etc.

Once the audit team has worked through each stage of POMRIE it is ready to turn the recommendations into narrative form for the client organization. The POMRIE approach is intended for use

by the audit team in its deliberations and not as a framework for the presentation of the recommendations to the client organization. For example, the Reality step would never be included in the narrative that is prepared for the organization.

It is our contention that the process of developing client-centered recommendations is one of the most critical steps in the communication audit process and, therefore, should be most carefully considered.

PART V

Instrument Modifications

In Part I of this paper we identified seven criticisms of the ICA Audit as it is presently constituted. Part II examined the centrally-controlled OU-Regional Data Bank, its comparison with the National Data Bank, and the differences that emerged between the two. Part III summarized a follow-up audit impact study. Part IV advanced a procedure for developing client-centered recommendations from the data collected through the Interview, Communicative Experience, and Survey instruments. In Part V we are examining the appropriateness of perception-based instruments, replacement of the 5-point Likert-type response options with fractionation scales (Barnett, et al., 1982), use of Network Approximation (Stewart, 1982) for describing the network pattern and other structural and content changes for the audit instruments.

The use of self-report perception-based instruments occasionally draws fire over the "accuracy" of respondents' perceptions of their environments. However, the interviews that precede and follow the administration of the survey instrument provide the researchers with an opportunity to observe communication behaviors of subjects and, if interviews are conducted in groups, there is some opportunity to observe group interaction. The perceptual data that is collected, however, should not be discounted. Organizational members' perceptions of reality are, in fact, the reality that controls behavior. What the researcher observes to be "true" about members' communication behavior may not be as important as the members' beliefs about what is

"true". Previous research has indicated the strength of perceptual impact on behavior (DeWine, Brammer, Lukens, Rauschenberg, Shatto, & Walence, 1984). Interpretive research suggests that to ask subjects to explain "what life is like" in the organization will provide the researcher with more insight than to try and interpret the behaviors themselves. The same argument can be made for perceptual data of any kind. Additionally, any type of action research should be used to provide the organization with a "picture" that they can compare to their sense of reality.

To make this perceptual data more directly linked to behavior we are suggesting instructions at the beginning of the instrument that ask respondents to reflect about recent communication events. Weick (1979) has suggested that people are more likely to make sense of their actions only after they have acted. The changes in the instructions ask respondents to base their responses on recent "acts" to enhance their "sense-making" ability.

In response to criticisms about the restrictions imposed on the respondent's and the audit team by the use of the Likert-type scales, we have adopted the metric fractionation scales developed by Barnett, Hamlin, and Danowski (1982). The unrestricted range and density of these scales make possible the "determination of subtle relations among variables" (Barnett, et al., 1981, p. 460). Their testing of these scales with the ICA Audit suggest that they are quite workable in an organizational setting and that they do allow for finer discrimination among variables.

> Because fractionation scales have a true zero point and are unbounded, they are capable of measuring change over time and the process of communication. . . True variance is not limited by the scale. As a result, the differences in communication patterns are not homogenized and the differences among organizations . . . are not restricted (Barnett, et al., 1982, p. 459).

Instead of limiting responses to a five-point scale, respondents are told that "0" is none at all of the topic being examined and "50" is an average amount. One might use "35", "90", "140" or more, depending on how much below or above average the item is in the organization.

Along with changes in the scaling of the Survey instrument we are recommending use of Network Approximation developed by Stewart (1982) in place of Network Analysis. Network Approximation is based on ECCO Analysis (Davis, 1953) in that it follows the flow of messages through the organization rather than people. Stewart suggests identifying the population of messages in the organization through the use of communication diaries, tracing a sample of these messages through the organization, use of a new computer program to determine the number of sample messages needed to complete a Network Approximation, and a final tracing of sample messages which will generate a network structure.

Problems researchers have had with Network Analysis have included respondents' difficulty in recalling "typical" interactions with others. The advantage of Network Approximation is that it asks for facts about specific information (e.g., "From whom did you first receive this message?"). The most significant drawback in tracing messages has been the lack of a computer program that would permit the analysis of large data sets. Stewart's (1982) computer program that accompanies Network Approximation eliminates this shortcoming.

The time necessary to complete the Survey instrument and the redundancy of some of the items combine to make it less appropriate for some organizations than other instruments. The identification of structural and content problems with the instrument includes: too long, less precision on some scales than was desirable, and loss of potentially useful information.

One of the easiest changes we recommend is to name the Survey instrument something that more clearly indicates what it purports to assess: Survey of Organizational Communication (SOC).

Based on the factor analysis of the OU-Regional Data Bank, plus the recommendations from the follow-up impact study, several items in the ICA Audit Survey instrument have been eliminated. This allows for a stronger internal structure of the survey as well as reducing the amount of time needed to administer the

audit. Also, the reliability tests indicated that the elimination of certain items would increase the alpha levels. Thus, we argue for the modification of the Survey instrument by shortening it and increasing the usefulness of the items that remain Toward those ends, we have reduced the Survey instrument to fewer than 100 items.

The original Survey instrument consisted of 122 items ranging across 8 scales. The Survey of Organizational Communication (SOC) consists of 6 scales, 2 matrices, and one set of 3 open-ended questions. While this may seem more complex than the original, it provides for ease of administration and both quality and quantity of information. (See Appendix B for a copy of SOC)

We have made one exception to our goal of shortening the instrument. We have added three open-ended questions in an attempt to collect data on the quality of information relating to decisions affecting the respondent's job, organizational decisions, and how the respondent's job relates to the total organization's goals.

Some parts of the original survey instrument seem isolated and incomplete. For example, respondents are asked to indicate the quantity of information received from sources and channels without any indication of variation across types of information. We have developed two matrices as part of the SOC that allow directionality on quality of the information from sources and channels (called for by Downs, et al., 1981) as well as room for responses across types of information.

Does the audit provide a wealth of information for improving an organization? Perhaps. What it does present is an organization's generalized and collective view of its communication climate which may or may not be parallel with the views of top management. It is important that uniformity and consistency be applied in the manner in which those "collective views" are analyzed and interpreted so that the greatest amount of useful information may be returned to the organization.

This paper presents a series of modifications designed to improve the utility of the ICA Audit. With the modified version

(SOC) of these instruments and procedures, we assert that its usefulness will be enhanced and its administration streamlined. However, the mechanism for widespread acceptance and implementation of these modifications is not specified elsewhere in the paper.

At the 1984 ICA meeting in San Francisco, one of the charges to an ad hoc committee of Division IV members was to suggest a project that would be as successful in the next few years as the ICA Audit developmental process was for the Division during the 1970s. It is our contention that a Division-wide examination and testing of the modifications presented in this paper will be an appropriate activity. It is acknowledged that the ICA Audit is a useful tool in assessing the communicative health of an organization. Building on the proven base of that success and continuing to adapt the instruments for greater success is a conscientious and efficient way to use our resources.

END NOTES

1 The following items had significant ($p < .01$) t-tests between the National Data Bank and the Ohio University Regional Data Bank:

Statement # 2, 5, 9, 10, 12, 14, 16, 18, 20, 22, 26, 28, 30, 33, 34, 36, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 49, 53, 54, 55, 56, 57, 58, 59, 60, 62, 63, 64, 65, 66, 68, 69, 71, 72, 73, 74, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 92, 93, 94, 95, 96, 97, 100, 102, 104, 105, 106, 107, 111, 112, 113, 115, 116, 117, 119, and 120.

2 The 13 subscales of the original ICA Audit Survey (Goldhaber & Rogers, 1979) are:

Receiving Information from Others - Current
Receiving Information from Others - Needed

Sending Information to Others - Current
Sending Information to Others - Needed

Follow-up on Information Sent - Current
Follow-up on Information Sent - Needed

Sources of Information - Current
Sources of Information - Needed

Channels of Communication - Current
Channels of Communication - Needed

Timeliness of Information Received from Key Sources

Organizational Communication Relationships

Organizational Outcomes

3 The overall factor analysis is available from the authors.

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APPENDIX A

POST-AUDIT INTERVIEW AND QUESTIONNAIRE GUIDE

Interviewee: _____

Organization:_____

[The first 2 questions comprise the interview segment of the process.]

1. To what extent were the recommendations of the communication audit adopted? (Ask for examples.)

   A. None
   B. Some
   C. Most
   D. All

2. Indicate alterations in organizational processes which occurred as as result of the communication audit and whether they were 1) created, 2) changed, 3) eliminated, or 4) discontinued:

   A. Specific behavior:

   B. Events:

   C. Practices/Activities:

   D. Employee skills:

Communication Audit's Impact on Communication Effectiveness

[The interviewee personally completes the following items.]

Indicate how you feel about the impact of the communication audit on the following communication variables.

Use the following scale for you answers:

1. Worse
2. No improvement
3. Some improvement
4. Significant improvement

	COMMUNICATION VARIABLES				
1.	Communication Overload.....	1	2	3	4
2.	Communication Underload.....	1	2	3	4
3.	Communication Sources.....	1	2	3	4
4.	Communication Channels.....	1	2	3	4
5.	Communication Quality.....	1	2	3	4
6.	Communication Timeliness.....	1	2	3	4
7.	Communication Usefulness.....	1	2	3	4
8.	Communication Accuracy.....	1	2	3	4
9.	Communication Relationships.....	1	2	3	4
10.	Communication Roles.....	1	2	3	4

Communication Audit's Impact on Organizational Effectiveness

Indicate how you feel about the communication audit's impact on the following organizational variables.

Use the following scale for your answers:

1. No improvement
2. Some improvement
3. Significant improvement
4. Not applicable

ORGANIZATIONAL VARIABLES

1. Profits.....1 2 3 4
2. Net Operating Costs.....1 2 3 4
3. Sales or Service.....1 2 3 4
4. Productivity (Output).....1 2 3 4
5. Work Errors.....1 2 3 4
6. Performance Rating.....1 2 3 4
7. Morale.....1 2 3 4
8. Turnover.....1 2 3 4
9. Absenteeism.....1 2 3 4
10. Complaints/Grievances.....1 2 3 4
11. Accidents.....1 2 3 4

CLOSING QUESTIONS

1. Do you feel the communication audit was beneficial?

   A. Yes
   B. No
   C. No Opinion

2. Would you recommend continued use of communication audits to evaluate and improve communication in organizations?

   A. Yes
   B. No
   C. No Opinion

APPENDIX B

SURVEY OF ORGANIZATIONAL COMMUNICATION

INSTRUCTIONS

As you complete this survey, think of communication patterns as they currently exist in your organization. Do not consider how things have been in the past or how you hope they will be in the future, but how people communicate today. Try to think of interactions you have had with various people in your organization during the last 1 or 2 weeks and use these incidents as examples.

PLEASE MARK ONLY ONE RESPONSE TO EACH QUESTION

You may find the following definitions useful as you answer the questions on this survey:

[Some of the terms it often helps to define include:
communication, information, company
policies, grapevine, middle management]

DIRECTIONS

Questions on the following pages use this scale:

0	50	100	150
None	Average	Twice Average	Three Times Average...

On this scale, "50" is always average and "0" is none at all. For example, say that "50" represents the average amount of information an employee gets about safety practices. If "50" is the average amount, then you decide how much safety information you get. Use any number that is right for you. If you think you get less safety information than average, write a number less than "50". If you get more than an average amount of safety information, then write a number greater than "50" that shows how much more than average you get. If you feel you get about an average amount, then use "50". If you feel you get no information, then use "0". Place your number on the line or in the box to the right of each question.

EXAMPLE

If "50" is average accuracy, how accurate is your local newspaper about what your organization is doing? _____

If the local newspaper coverage on your organization is above average in accuracy, use a number greater than "50" to show how much. You might use "75" or "140" depending on how much above average the accuracy is. If you feel there is less than average pick a number smaller than "50". If the accuracy is about average, use "50". If it is not accurate at all, then use "0".

Receiving Information from Others

Below are types of information you may receive from various sources within your organization. Give each topic two scores. First, score each for how much of that information you get, if "50" is the average amount an employee gets. Then score each for how much you need to carry out your work activities in the best way you can.

TOPIC	How Much I Receive	How Much I Need
How well I am doing my job		
My job duties		
Organizational policies		
Pay and benefits		
How technological changes affect my job		
Mistakes and failures of my organization		
Promotion and advancement opportunities in my organization		
Important new program, product, or service developments in my organization		
Specific problems faced by management		

Sending Information to Others

Below are types of information you may send to various sources within your organization. Give each topic two scores. First, score each for how much of that information you send, if 50" is the average amount an employee gets. Then score each for how much you need to send to carry out your work activities in the best way you can.

TOPIC	How Much I Send	How Much I Need
Reporting what I am doing in my job		
Reporting what I think my job requires me to do		
Reporting job-related problems		
Complaining about my job and/or work conditions		
Requesting information necessary to do my job		
Evaluating [grading] the performance of my immediate supervisor		
Asking for clearer work instructions		

Follow-Up on Information Sent

Below are sources to whom you might send information within your organization. Give each topic two scores. First, score each for how much follow-up you get, if "50" is the average amount an employee gets. Then score each for how much follow-up you need to receive to carry out your work activities in the best way you can.

TOPIC	How Much I Receive	How Much I Need
Subordinates		
Co-workers		
Immediate Supervisor		
Middle management		
Top management		

Interpersonal Communication Relationships

Below are different communication relationships you may have established within your organization. Give each topic one score that indicates the nature of the communication relationship in question, if "50" is the average amount for an employee.

TOPIC	
I trust my co-workers	
My co-workers get along with each other	
My relationship with my co-workers is satisfying	
My immediate supervisor is honest with me	
My immediate supervisor listens to me	
My relationship with my immediate supervisor is satisfying	
I trust top management	
Top management is sincere in its efforts to communicate with employees	
My relationship with top management is satisfying	

Individual Impact on the Organization

Below are areas on which you may feel you have an impact within your organization. Give each topic two scores. First, score each for how much impact you think you have, if "50" is the average amount an employee has. Then score each for how much impact you need to have to carry out your work activities in the best way you can.

TOPIC	How Much I Have	How Much I Need
I have a say in decisions that affect my job		
I influence operations in my area		
I have a part in accomplishing my organizations' goals		

Organizational Outcomes

Below are topics concerning your satisfaction with working in the organization. Give each topic one score that indicates the degree to which you are satisfied with that topic, if "50" is the average amount of satisfaction for an employee.

TOPIC	
My job	
My pay	
My progress in the organization to this point in time	
My chances for getting ahead in the organization	
My opportunity to "make a difference"-- to contribute to the overall success of my organization	
My organizations' system for recognizing and rewarding outstanding performance	
My organizations' overall communicative effort	
My organization as compared to other such organizations	
My organizations' overall efficiency of operation	
The overall quality of my organizations' product or service	
My organizations' achievement of its goals and objectives	

Channels of Information

Below are listed a number of channels from which you receive information about various aspects of your organization. Give each topic three sets of scores. Each set of scores should indicate the degree to which the information you receive from that source is <u>useful</u>, <u>accurate</u>, and <u>timely</u>. Remember that "50" is average, "0" is of no value, "100" is twice the average, etc.

TOPIC / CHANNELS	Job-Related Information			Personal Issues			Organizational Information		
	Useful-ness	Accu-racy	Timeli-ness	Useful-ness	Accu-racy	Timeli-ness	Useful-ness	Accu-racy	Timeli-ness
Telephone									
The"grapevine"									
Written memos, letters									
Bulletin boards									
Internal publications (newsletters, etc.)									
Computers									
Magazines									
Newspapers									
Teleconferences									
Radio									
Television									
Speeches									
Films, videotapes									

Sources of Information

Below are listed a number of sources from which you receive information about various aspects of your organization. Give each topic three sets of scores. Each set of scores should indicate the degree to which the information you receive from that source is <u>useful</u>, <u>accurate</u>, and <u>timely</u>. Remember that "50" is average, "0" is of no value, "100" is twice the average, etc.

TOPIC / SOURCES	Job-Related Information			Personal Issues			Organizational Information		
	Useful-ness	Accu-racy	Timeli-ness	Useful-ness	Accu-racy	Timeli-ness	Useful-ness	Accu-racy	Timeli-ness
Face-to-face contact between two people*									
Face-to-face contact among more than two people									
Co-workers in my own department									
Individuals in other departments									
Immediate supervisor									
Department meetings									
Middle management									
Formal management presentations									
Top management									

*EXAMPLE: If you were reading the first question it would go like this, "How useful is job-related information you receive face-to-face with another person?"

Quality of Information

The following questions are provided so that you can be more specific in the responses you make. The questions are not the same as you have already answered and <u>your responses should be a statement or statements</u> rather than a number like "50".

1) When decisions are made in the organization that will affect your job, how do you find out about them? Who tells you? When are you told? How much information about the decision do you receive?

2) When changes are to be made in the organization (not related specifically to your job), how do you find out about them? When do you usually know about the changes? From whom?

3) What types of information do you receive to let you know how your job relates to the goals of the total organization? How often do you get the information, if at all? From whom?

COMMUNICATIVE EXPERIENCE FORM

As you have been recording your responses to the items in this survey, the questions may have brought to mind a recent work-related experience of yours in which communication was particularly effective or ineffective. Please respond to the questions below and give us a clear summary of that experience.

A. To whom does this experience primarily relate? (Circle one)

1. subordinate 2. co-worker 3. immediate supervisor

4. middle management 5. top management

B. Please circle the quality of communication described in the experience below (circle one):

1. effective 2. ineffective

Describe the communicative experience, the circumstances leading up to it, what the person did that made him/her an effective or ineffective communicator, and the results (outcome) of what the person did. Please write legibly. THANK YOU.

TABLE 1

Demographic Description of CO-Regional Data Bank Respondents

Question	Response Option	Number Responding	%
1. Source of income?	Salaried	397	34.6
	Hourly	690	60.2
	Piece Work	31	2.7
	Commission	15	1.3
	Other	14	1.2
	Missing	433*	
2. Sex?	Male	790	52.3
	Female	713	47.2
	Missing	77	
3. Do you work:	Full-time	623	70.8
	Part-time	214	24.3
	Temp. Full-time	27	3.1
	Temp. Part-time	16	1.8
	Missing	700	
4. Long working?	1 yr or less	291	20.3
	1 to 5 yrs	643	44.8
	6 to 10 yrs	193	13.4
	11 to 15 yrs	158	11.0
	16 yr or more	151	10.5
	Missing	144	
5. Held current position?	1 yr or less	352	33.7
	1 to 5 yrs	409	39.2
	6 to 10 yrs	149	14.3
	11 to 15 yrs	70	6.7
	16 yrs or more	64	6.1
	Missing	536	
6. What is position?	No Supervision	368	49.3
	First Line Sup.	121	16.2
	Middle Management	77	10.3
	Top Management	57	7.6
	Other	124	16.6
	Missing	833	
7. Last school level?	Less than H.S.	112	7.6
	H.S. Grad	480	37.6
	Some College	416	28.2
	College Grad	288	19.5
	Grad Work	178	12.1
	Missing	106	
8. Age?	Under 20 yrs	158	10.5
	21 to 30 yrs	865	57.6
	31 to 40 yrs	353	23.5
	41 to 50 yrs	202	13.4
	Over 50 yrs	224	14.9
	Missing	78	
9. Communication training?	None	428	28.8
	Little	282	19.0
	Some	579	39.0
	Extensive	192	12.9
	Missing	94	
10. Money last year?	Less $9,000	486	39.0
	$9,000-11,999	267	21.4
	$12,000-17,999	314	25.2
	$18,000-24,999	141	11.3
	More $25,000	37	3.0
	Missing	335	
11. Worked other orgs?	None	584	40.5
	One Other	287	19.9
	Two Others	213	14.9
	Three Others	135	9.4
	Four or More	221	15.3
	Missing	138	
12. Looking for a job?	Yes	305	23.1
	No	1010	76.5
	Missing	360	

+ 17 organizations with N = 1,580; administered 1978-1981

* Missing data not included in tabulations of percentages; data missing because of non-response or because editing of items resulted in their omission during one or more audits.

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TABLE 2

ICA Audit Survey Instrument Subscales: Descriptive and Reliability Data
OU-Regional Data Bank

Scale Names/ (# of items)	Mean of total score	SD	Grand Mean	Alpha*	Previous Alpha**	Selected Deletion
Total instr.	na***	na	na	.972	na	na
Information Received - Current (13)	39.06	13.13	3.00	.889	.860	na
Information Received - Needed (13)	47.17	16.23	3.62	.931	.876	na
Sending Information- Current (7)	20.57	7.40	2.93	.812	.798	na
Sending Information - Needed (7)	23.00	9.42	3.28	.887	.629	na
Follow-Up Current (5)	16.41	8.13	3.28	.802	.804	#41/.81
Follow-Up Needed (5)	18.45	8.53	3.69	.836	.565	na
Sources - Current (9)	29.10	11.41	3.23	.792	.794	#51/.81
Sources - Needed (9)	32.98	13.26	3.66	.850	.771	na
Timeliness (6)	21.06	8.34	3.51	.734	.460	#69/.75
Relationships (19)	67.03	18.72	3.52	.935	.902	na
Outcomes (13)	42.45	13.94	3.26	.927	.878	na
Channels (16)	52.07	19.75	3.25	.894	----	na

* Based on the Ohio University Regional Data Bank
** Based on ICA Audit National Data Bank (Porter, 1979)
*** na=not applicable

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TABLE 3

Factor Analysis of Receiving Information - Current

Item # and Statement		Factor 1 Organiz. Activ.	Factor 2 Personal Perform.	Factor 3 Policies Benefits
1.	How well I am doing in my job.	.228	.805	.053
3.	My job duties.	.028	.737	.327
5.	Organizational policies.	.150	.244	.708
7.	Pay and benefits.	.027	.241	.746
9.	How technological changes affect my job.	.482	.286	.117
11.	Mistakes and failures of my org.	.655	.146	.017
13.	How I am being judged.	.420	.603	.142
15.	How my job-related problems are being handled.	.465	.515	.241
17.	How organization decisions are made that affect my job.	.719	.182	.265
19.	Promotion and advancement opportunities in my organization.	.444	.044	.599
21.	Important new product, service, or program developments in my org.	.582	.036	.501
23.	How my job relates to total operation of my organization.	.442	.451	.262
25.	Specific problems faced by management.	.684	.217	.149
	Percent of variance accounted for:	39.30	8.20	8.00

TABLE 4

Factor Analysis of Receiving Information - Needed

Item # and Statement		Factor 1 Organiz. Effect.	Factor 2 Personal Perform./ Policies Benefits
2.	How well I am doing in my job.	.220	.762
4.	My job duties.	.115	.836
6.	Organizational policies.	.282	.718
8.	Pay and benefits.	.317	.597
10.	How technological changes affect my job.	.644	.138
12.	Mistakes and failues of my org.	.663	.223
14.	How I am being judged.	.412	.620
16.	How my job-related problems are being handled.	.527	.495
18.	How organization decisions are being made that affect my job.	.668	.284
20.	Promotion and advancement opportunities in my organization.	.556	.339
22.	Important new product, service, or program developments in my org.	.734	.255
24.	How my job relates to total operation of my organization.	.562	.404
26.	Specific problems faced by management.	.715	.166
	Percent of variance accounted for:	44.80	8.90

TABLE 5

Factor Analysis of Sending Information - Current

Item # and Statement	Factor 1
27. Reporting what I am doing in my job.	.713
29. Reporting what I think my job requires me to do.	.737
31. Reporting job-related problems.	.681
33. Complaining about my job and/or working conditions.	.577
35. Requesting information necessary to do my job.	.691
37. Evaluating the performance of my supervisor.	.557
39. Asking for clearer work instructions.	.683
Percent of variance accounted for:	44.40

TABLE 6

Factor Analysis of Sending Information - Needed

Item # and Statement	Factor 1
28. Reporting what I am doing in my job.	.733
30 Reporting what I think my job requires me to do.	.772
32. Reporting job-related problems.	.702
34. Complaining about my job and/or working conditions.	.638
36. Requesting information necessary to do my job.	.757
38. Evaluating the performance of my immediate supervisor.	.653
40. Asking for clearer work instructions.	.699
Percent of variance accounted for:	50.40

TABLE 7

Factor Analysis of Follow-Up - Current

Item # and Statement		Factor 1
41.	Subordinates	.684
43.	Co-workers	.747
45.	Immediate Supervisor	.782
47.	Middle Management	.824
49.	Top Management	.711
	Percent of variance accounted for:	56.50

TABLE 8

Factor Analysis of Follow-Up - Needed

Item # and Statement		Factor 1
42.	Subordinates	.735
44.	Co-workers	.789
46.	Immediate Supervisor	.837
48.	Middle Management	.862
50.	Top Management	.761
	Percent of variance accounted for:	63.80

TABLE 9

Factor Analysis of Sources - Current

Item # and Statement		Factor 1 Hierarchy	Factor 2 Peers/ Subords.
51.	Subordinates (if applicable)	.538	.480
53.	Co-workers in my own unit/department.	.488	.577
55.	Individuals in other units or departments in my organization.	.557	.251
57.	Immediate supervisor.	.588	.092
59.	Department meetings.	.722	-.184
61.	Middle management.	.730	-.324
63.	Formal management presentations.	.758	-.311
65.	Top management.	.670	-.357
67.	The "grapevine."	.198	.560
	Percent of variance accounted for:	36.70	14.60

TABLE 10

Factor Analysis of Sources - Needed

Item # and Statement		Factor 1 Hierarchy	Factor 2 Peers/ Subords.
52.	Subordinates (if applicable)	.348	.648
54.	Co-workers in my own unit/department.	.341	.709
56.	Individuals in other units or departments in my organization.	.329	.671
58.	Immediate supervisor.	.509	.511
60.	Department meetings.	.709	.319
62.	Middle management.	.804	.243
64.	Formal management presentations.	.806	.161
66.	Top management.	.803	.100
68.	The "grapevine."	-.083	.665
	Percent of variance accounted for:	47.20	12.10

TABLE 11

Factor Analysis of Timeliness

Item # and Statement		Factor 1 Mgmt.	Factor 2 Peers
69.	Subordinates (if applicable).	.390	.593
70.	Co-workers.	.353	.711
71.	Immediate Supervisor.	.741	.138
72.	Middle Management.	.853	.091
73.	Top Management.	.733	.102
74.	The "grapevine."	-.171	.772
	Percent of variance accounted for:	41.50	18.80

TABLE 12

Factor Analysis of Organizational Communication Relationships

Item # and Statement	Factor 1 Supervisor	Factor 2 Top Management	Factor 3 Co-wrkrs	Factor 4 Personal Influence
75. I trust my co-workers.	.169	.102	.794	.131
76. My co-workers get along with each other.	.158	.087	.852	.042
77. My relationship with my co-workers is satisfying.	.215	.096	.823	.053
78. I trust my immediate supervisor.	.826	.210	.184	.053
79. My immediate supervisor is honest with me.	.831	.207	.176	.045
80. My immediate supervisor listens to me.	.846	.173	.126	.122
81. I am free to disagree with my immediate supervisor.	.761	.048	.035	.270
82. I can tell my immediate supervisor when things are going wrong.	.804	.033	.084	.238
83. My immediate supervisor praises me for a good job.	.694	.140	.045	.239
84. My immediate supervisor is friendly with his/her subordinates.	.741	.135	.185	.108
85. My immediate supervisor understands my job needs.	.764	.232	.183	.072
86. My relationship with my immediate supervisor is satisfying.	.843	.206	.163	.086
87. I trust top management.	.225	.849	.108	.145
88. Top management is sincere in their efforts to communicate with employees.	.195	.873	.088	.205
89. My relationship with top management is satisfying.	.168	.870	.099	.176
90. My organization encourages differences of opinion.	.204	.596	.096	.381
91. I have a say in decisions that affect my job.	.231	.435	.041	.672
92. I influence operations in my unit or department.	.185	.172	.057	.840
93. I have a part in accomplishing my organization's goals.	.188	.246	.154	.761
Percent of variance accounted for:	44.10	12.90	9.20	6.00

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TABLE 13

Factor Analysis of Organizational Outcomes

Item # and Statement		Factor 1 Organiz. Effect.	Factor 2 Personal Achieve.
94.	My job.	.437	.444
95.	My pay.	.124	.646
96.	My progress in my organization up to this point in time.	.259	.741
97.	My chances for getting ahead in my organization.	.186	.785
98.	My opportunity to "make a difference" to contribute to the overall success of my organization.	.306	.685
99.	My organization's system for recognizing and rewarding outstanding performance.	.359	.679
100.	My organization's concern for its members' welfare.	.532	.581
101.	My organization's overall communicative effort.	.576	.488
102.	Working in my organization.	.601	.454
103.	My organization, as compared to other such organizations.	.725	.336
104.	My organization's overall efficiency of operation.	.819	.232
105.	The overall quality of my organization's product or service.	.846	.144
106.	My organization's achievement of its goals and objectives.	.805	.245
	Percent of variance accounted for:	50.80	9.40

TABLE 14

Factor Analysis of Channels - Current

Item # and Statement	Factor 1 Media & Pubs. - Needed	Factor 2 Phone/ Memos	Factor 3 Face-to-Face	Factor 4 Media & Pubs. - Current	Factor 5 Bulletin Boards
107. Face-to-face contact between two people.	-.179	.044	.768	.196	.059
109. Face-to-face contact among more than two people.	-.160	.095	.793	.247	.092
111. Telephone.	-.105	.814	.146	.189	-.019
113. Written memos, letters.	.034	.618	.116	.378	.144
115. Bulletin Boards.	-.057	.056	.043	.251	.823
117. Internal Publications (newsletter, magazine).	.180	.211	.045	.622	.242
119. Internal AV Media (films, slides, videotapes).	.173	.024	.058	.715	.159
121. External Media (TV, radio, newspapers).	.287	.112	.065	.656	-.243
Percent of variance accounted for:					

TABLE 15

Factor Analysis of Channels - Needed

Item # and Statement	Factor 1 Media & Pubs. - Needed	Factor 2 Phone/ Memos	Factor 3 Face-to-Face	Factor 4 Media & Pubs. - Current	Factor 5 Bulletin Boards
108. Face-to-face contact between two people.	.408	.194	.657	-.294	.029
110. Face-to-face contact among more than two people.	.460	.221	.644	-.258	.046
112. Telephone.	.292	.800	.083	-.076	-.034
114. Written memos, letters.	.462	.620	.068	-.011	.182
116. Bulletin Boards.	.453	.070	.036	-.114	.749
118. Internal Publications (newsletter, magazine).	.660	.188	-.009	.259	.253
120. Internal AV Media (films, slides, videotapes).	.743	.074	-.042	.262	.132
122. External Media (TV, radio, newspapers).	.699	.067	-.037	.372	-.132
Percent variance accounted for:	27.00	13.10	10.40	9.00	7.30

TABLE 16

Communication Variables
Survey Results

Variable	Response Option* 1	2	3	4
1. Overload	0%	50%**	33%	17%
2. Underload	0%	33%	33%	33%
3. Sources	0%	0%	67%	33%
4. Channels	0%	0%	50%	50%
5. Quality	0%	17%	83%	0%
6. Timeliness	0%	17%	50%	33%
7. Usefulness	0%	17%	66%	17%
8. Accuracy	0%	17%	83%	0%
9. Relationships	0%	0%	83%	17%
10. Roles	0%	0%	100%	0%

* Response key: 1 = worse; 2 = no improvement; 3 = some improvement; 4 = significant improvement

** Listed by percent of organizations responding; N = 6

TABLE 17

Organizational Effectiveness Survey Results

Variable	Response Option* 1	2	3	4
1. Profits	17%**	17%	17%	49%
2. Net Operating Costs	33%	33%	0%	33%
3. Sales/Service	17%	49%	17%	17%
4. Productivity	0%	33%	66%	0%
5. Work Errors	0%	50%	33%	17%
6. Performance Ratings	17%	17%	66%	0%
7. Morale	0%	17%	83%	0%
8. Turnover	33%	33%	0%	33%
9. Absenteeism	66%	17%	0%	17%
10. Complaints/Grievances	0%	50%	50%	0%
11. Accidents	66%	0%	0%	34%

* Response key: 1 = no improvement; 2 = some improvement; 3 = significant improvement; 4 = not applicable

** Listed by percent of organizations responding; N = 6